

# ***ENLISTED AIRCREW ACADEMICS***

## ***BASIC FLIGHT ENGINEER & LOADMASTER COURSES***

***LITTLE ROCK AFB, AR***



## ***STUDENT INFORMATION & ORIENTATION BOOKLET***

JUNE 2005



**ARKANSAS AIR NATIONAL GUARD**  
**HEADQUARTERS 189<sup>TH</sup> AIRLIFT WING (ANG)**  
**LITTLE ROCK AIR FORCE BASE, ARKANSAS**

**STUDENTS:**

Welcome to the Air National Guard Basic Academic School and congratulations as you enter, or continue, your career as Loadmasters or Flight Engineers. Your commanders and supervisors have placed a great deal of confidence in you as evident by your selection to attend this school. The challenges and opportunities are yours for the taking. The responsibilities you will have as an enlisted aircrew member will be greater than any you've had in the past. Aviation is obviously a very serious business, thus, the atmosphere you will find in this school will also be serious. You will have the finest, most professional instructors available. They are dedicated to your success in this critical first step in your aviation career.

We will be ready when you arrive to provide you the best training the Air National Guard has to offer. We know that you will arrive prepared to take advantage of every day to do your best to become a qualified aircrew member and furthermore, an asset to the defense of our great nation.

Again, congratulations on your selection, welcome, and our very best wishes.

*SAM CHAMBERLAIN*

**SAMUEL R. CHAMBERLAIN JR., CMSgt, AR ANG**  
**Enlisted Aircrew Training Manager**

# ***ARKANSAS AIR NATIONAL GUARD***

## **FACT SHEET**

### **Who we are**

The Arkansas Air National Guard's 189th Airlift Wing is located on Little Rock Air Force Base, Ark., and is aligned in the standard combat wing organization with the 189 AW headquarters staff, 189th Operations Group, 189th Maintenance Group, 189th Mission Support Group and the 189th Medical Group. In addition, the wing provides support to five geographically separated units: the Arkansas Air National Guard headquarters, the 123rd Intelligence Squadron and the 154th Weather Flight on Little Rock AFB, the 223<sup>rd</sup> Combat Communications Squadron in Hot Springs, Ark., and the National Guard Marksmanship Training Center at Camp Joseph T. Robinson in North Little Rock, Ark.

### **Mission**

The mission of the 189 AW is to train C-130 aircrew instructor candidates to become instructors in their respective crew positions, so that they may return to their units and help keep their unit members combat ready. In addition, the wing operates the Air National Guard Enlisted Aircrew Academic School, which trains all the Air Force's C-130 entry-level loadmasters before they are sent across base to the 314th Airlift Wing for initial and mission qualification training. Additionally, the academic school is one of two flight engineer schools to provide entry-level flight engineer training for Air Force flight engineers.

### **Unit History**

The 189 AW is a direct descendant of the Arkansas National Guard's 154th Observation Squadron, which was formed Oct. 24, 1925, at Little Rock Municipal Airport in Little Rock, Ark. The 154th Observation Squadron was ordered to active duty in 1940 and saw action during World War II in North Africa, Sicily, Italy, France and England. It was redesignated the 154th Fighter Squadron on its return to inactive status after the war. The squadron again was ordered to active duty in October 1950 for the Korean conflict, flying combat missions out of Itazuke Air Base, Japan, and Taegu, Korea, as part of the 136th Fighter Group. The squadron returned to inactive status in the spring of 1952 and was redesignated the 154th Tactical Reconnaissance Squadron. The squadron moved from Adams Field to Little Rock Air Force Base, Jacksonville, Ark., in September 1962 and reorganized as the 189th Tactical Reconnaissance Group one month later when elements of the 123rd Air Base Group were added. In June 1965, the group became the first Air National Guard organization to be equipped with RF-101 aircraft. As a result of the Pueblo Crises, the 189th was recalled to active duty in January 1968. In July of that year, the 154th Tactical Reconnaissance Squadron (augmented) deployed from Little Rock AFB to Itazuke, Japan. In December, the squadron was released from active duty and returned to inactive status at Little Rock AFB and assumed the RF-101 Replacement Training Unit mission from the active Air Force.

### *History Continued*

On Jan. 1, 1976, the unit was designated as the 189th Air Refueling Group and converted to a KC-135 air-to-air refueling mission, becoming one of the first Air National Guard units to be assigned to the Strategic Air Command as a gaining command. 189th Airlift Wing Office of Public Affairs Little Rock AFB AR 72099-4802 (501) 987-6068. As an integral part of SAC under "Total Force," the 189th ARG maintained an around-the-clock ALPHA Alert, participated in European, Alaskan and Pacific Tanker Task Forces, and supported world-wide temporary tanker task forces performing in-flight refueling of all types of aircraft as assigned by the Strategic Air Command. On Oct. 1, 1986, the unit was redesignated as the 189th Tactical Airlift Group and converted to the C-130 aircraft. The mission squadron was redesignated as the 154th Tactical Airlift Training Squadron and assumed a proportionate share of initial aircrew qualification training, from the 314th Tactical Airlift Wing, Little Rock AFB. Student training actually began Sept. 25, 1986. During Operations Desert Shield and Desert Storm, 135 members were activated and served in both stateside and overseas locations. Aircrews from the 189th flew 123 mission sorties in support of the two operations without affecting the unit's day-to-day aircrew training mission. The 154th Training Squadron is one of the most highly decorated Air National Guard units in the nation boasting 16 battle streamers on wing organizational flag. On April 16, 1992, the 189th Tactical Airlift Group was officially redesignated as the 189th Airlift Group, and the 154th Tactical Airlift Training Squadron was redesignated as the 154th Training Squadron. On Oct. 1, 1995, the 189th Airlift Group was designated as the 189th Airlift Wing. The 189th AW was the first Air National Guard unit in the country to be located on an active duty Air Force base flying the same type aircraft as its active duty counterpart, and performing the same day-to-day mission. The 189th Airlift Wing has also played a role in current operations since the terrorist attacks of Sept. 11, 2001. The wing sent 30 volunteers to perform state active duty at Little Rock National Airport for the airport security mission, beginning Oct. 4, 2001, and ending May 31, 2002; then, on Oct. 16, 2001, the wing's entire security forces squadron was mobilized for two years. Security forces members spent time at multiple overseas locations and two stateside locations, providing air base ground defense. Since 9/11, the wing has deployed more than 500 members to support Operation Enduring Freedom, Operation Iraqi Freedom, Operation Noble Eagle and other operations around the world.

*(Current as of June 2005)*

## **GENERAL INFORMATION**

### **EDUCATION TRAINING COURSE ANNOUNCEMENTS (ETCA):**

This site lists the prerequisites for all courses taught at LRAFB. It is located at: <https://etca.randolph.af.mil>. Click on the ANG emblem and search Little Rock AFB for the Basic Loadmaster and the Basic Flight Engineer courses taught here at Building 137.

### **CONTACT INFORMATION:**

When arriving from the Little Rock National Airport, contact Base Transportation at 501.987.6086 to request base transportation to the base, as there is no regularly scheduled military or civilian shuttle/bus service to the base from the airport. If Base Transport is unavailable, Non-Prior Service (NPS) students may contact the Charge of Quarters "CQ" desk to request transportation from the student driver, at 501.987.2321. This is also based on a manning availability status. You should be prepared to pay approximately \$40.00 for a commercial taxi to the base. Request a receipt for filing with your travel voucher.

If you need to contact an instructor for the Basic Loadmaster or Basic Flight Engineer courses, during duty hours, call 501.987.7859, DSN: 731.7859.

### **IMPORTANT DOCUMENTS TO HAND CARRY:**

Non-Prior Service (NPS) Students: Bring all official military records. This should include any sealed packages that were given to you during your training. You will turn in all hand carried documents to the Military Training Leaders upon arrival/in-processing.

TDY students should hand-carry their medical record and orders.

### **DIRECTIONS FROM AIRPORT:**

If you arrive by commercial airline, you will land at Little Rock National Airport, which is approximately 20 miles from the air base. Turn right out of the airport exit and take I-440 East to US Hwy 67/167 North, Exit #11 to reach the main gate. From I-30 or 40, take exit #155, towards the Air Force Base. When you reach Jacksonville, take the air base exit #11 to reach the main gate. If you take a taxi, it will cost approximately \$50.00 so get a receipt for submitting with your travel voucher.

### **ARRIVAL & CHECK-IN REQUIREMENTS:**

When you arrive at the base, TDY students check-in at Billeting, Building 1024. NPS students are required to report to the CQ office located in Building 746. You will be issued a welcome packet with room assignment information and in-processing instructions. If you encounter any problems call the CQ at 501.987.2491.

Basic Academic Classes begin at 0745 in Building 137, (Maj Gen Bailey Drive)

**UNIFORM WEAR POLICY:**

NPS Airmen traveling at government expense by contract or commercial transportation will wear the blue service uniform (short or long-sleeve shirt with tie or tab). **All students are required to have “blues” for wear on every Wednesday in addition to Graduation day.**

**INDIVIDUAL EQUIPMENT:**

Check the web page at <https://etca.randolph.af.mil> for a list of required individual equipment. All ANG and AFRC students will be given a letter during FIQ/LIQ in-processing that explains the step-by-step process for their units to purchase the items they need.

NPS loadmaster students will be given a letter during LIQ inprocessing that explains the step-by-step process for the Active Duty Air Force Students to be given their initial issue of flight gear. The POC for all equipment issues is the 314<sup>th</sup> AW Student Registrar, Ms. Marti Ullendorf.

**TRANSPORTATION NON-AVAILABILITY LETTER:**

Currently the Transportation Squadron is undermanned and is unable to support the students the way they would like. Therefore, they are offering TDY students, who are lodged off-base and authorized a POV on their orders, a Non-Availability Letter. This allows those students to claim the distance from their off-base lodging to the school or flightline, on their travel voucher. Contact the Transportation Operations Supervisor at Building 551. You must provide a copy of your orders.

**LODGING:**

All students must check with the Razorback Inn (Lodging-Bldg 1024) front desk for Government Lodging. Members staying on base in government quarters are reimbursed the actual cost of their lodging (\$21.00-Enlisted). Members staying off-base in contract hotels are reimbursed the actual cost of their lodging not to exceed the maximum lodging rate. If you are assigned off-base quarters and desire to move on base when a room becomes available, you must inform the lodging clerk at the time you report in. If you move from where you are initially assigned, please report your new location information to your Instructor or MSgt Bogan. It is imperative that we are able to locate you.

**MEALS:**

All TDY students may eat in the base dining facility, Razorback Inn, Bldg 864. Students must show a copy of their TDY orders to the cashier and pay any applicable surcharges. The meal entitlement is paid based on what is indicated on your orders; a) Members directed to government mess or IAW JTR will receive \$10.10 per day; b) Proportional per diem for meals is \$22.00 per day; c) Full per diem for meals is \$34.00 per day. Members in contract quarters will receive full per diem for meals. Members staying off-base without a non-availability slip will receive per diem based on all government meals available and directed (\$10.10 per day) for meals.

**RAZORBACK CAFÉ':**

Building 864. Hours of operation: Monday – Friday:

Breakfast is from 6:00 to 7:30 a.m., Lunch is 10:30 a.m. to 1:00 p.m.;

Dinner is 4:00 – 6:30 p.m.

Saturday, Sunday and Holidays: Brunch: 8:30 a.m. to 1:00 p.m.

**ANG & AFRC (TDY) ORDERS CERTIFICATION:**

If you need to have your orders certified to start your pay, complete the statement of duty section and MSgt Bogan will fax it to your unit.

**TRAVEL VOUCHERS:**

Members TDY returning to their home station may file accrual payments with their home station. Please contact Travel Pay Customer Service Desk at extension 987.8294 for questions.

**FORWARDING MAIL:**

If you will be here more than 30 days, you may request a PSC box at Building 864 (Razorback Café). To receive mail for general delivery, you must first fill out a locator card, and can use the following address: Your Name, PCS Box 2400 (General Delivery), Little Rock AFB, AR 72099-4399. If you have questions, call 501.987.3478. Hours are 0730-1700, Mon.-Fri., & 0900-Noon on Saturday.

**APPEARANCE/STANDARDS:**

You are expected to maintain the appearance standards of your branch of service while assigned to LRAFB. Barbershops are conveniently located at the BXtra Bldg 960, near the Base Theater. Military Clothing Sales, Bldg 988, is in the same general area. Clothing Sales can special order required uniform items, including Army, Navy and Marines. Do not wear flight clothing to off-base establishments for extended shopping or socializing. Flightsuits will not be worn in establishments where the primary function is to sell or serve alcohol.

**VEHICLES/DRIVING:**

If your vehicle does not have a DoD registration, Pass and ID, Bldg 1255, the Main Gate Visitor Center; or the Security Forces, Bldg 480 can issue you a temporary one.

Seatbelts are mandatory. Base speed limit is 35mph, parking lots are 10 mph and base housing is 15 mph. Report all tickets to your instructor.

**ALCOHOL POLICY:**

If you drink, DON'T DRIVE!! LRAFB Policy on alcohol related incidents is stringent. Penalties can include dismissal from school, an Article 15, and revocation of your DoD driving privileges for one year.

Legal Limit: .08 DWI  
Under 21 - .02-.07 DUI

**TOBACCO USAGE:**

Tobacco use policies from the Chief of Staff of the Air Force and Commander, AETC, continue to be emphasized. AFI 40-102, "Tobacco Use in the Air Force", states: No tobacco use by students during duty hours. The term tobacco includes smokeless varieties. The broad initiative for tobacco reduction and elimination by Air Force leadership is not intended to threaten or thwart individual rights or choices. Instead, this is an effort to foster good health and well-being among our ever-improving force. Your cooperation in managing and implementing these policies is greatly appreciated.

**EQUAL OPPORTUNITY & SOCIAL ACTIONS:**

Discrimination, sexual harassment, or inappropriate comments based on race, ethnicity, religion, physical handicap age, gender or background will not be tolerated. It is contrary to good order and discipline, and detrimental to morale and cohesion, and will not be tolerated.

**SAFETY:**

A Mishap Report, AETC Form 435, must be completed when injured for any reason if medical attention was required or the injury causes missed duty.

High Risk Activities, AETC Form 410, must be completed by students participating in high risk activities such as skydiving, rappelling, etc... Failure to have a form on file will result in a line of duty determination in the event of an injury or incident.

**PASSES & LEAVE:**

Submit AF Form 988, Leave Request/Authorization and/or the pass form, AETC 29B, Safety Briefing, no earlier than 14 days and no later than 3 days prior to the first start day of the requested absence. You should take precautions with regard to weather forecasts, highly probable airline circumstances that might interfere with your timely return to duty. It is your responsibility to make every effort to return at the proper time. Leave can not be in conjunction with a 3-day pass. All passes will begin and end in the local area and must be certified by an instructor verifying you are not scheduled for training for the period of requested absence and have your signature certifying that you have read the safety briefing on the back of the form. If you are driving a POV, there is a 300-mile limit. A map showing the driving radius is available in the Admin section. If flying commercial, there is no mileage restriction in CONUS. NPS will process passes and leaves through the Military Training Leaders (MTL) in coordination with the Instructor. If you have a personal emergency or other situation which requires your absence from the base, you must notify your instructor, and NPS must also notify the MTL.

**MEDICAL CARE/TRICARE:**

The Flight Medicine Clinic is located on the 2<sup>nd</sup> floor in the 314<sup>th</sup> Medical Group at Building 1090. The primary mission is to serve Air Force members on flying/special operational duty status. If you require medical care during non-duty hours, you must call



987.8811. You may be given an appointment to be seen in the After Hours Clinic, given medical advice over the phone by an on-call provider, or authorization to be seen off-base. If you require emergency treatment, call 911 or go the nearest emergency room which is located at Rebsamen Medical Center on Marshall Road outside the front gate.

The TriCare Service Center is located in the front hallway of the 314<sup>th</sup> Med Group. The phone number is 988.2061/2057.

**INCLEMENT WEATHER POLICY:**

The 189<sup>th</sup> AW has a separate policy from the 314<sup>th</sup> AW for inclement weather. When television/radio announces the base is closed, the 189<sup>th</sup> AW may **not** be. If in doubt, call your instructor.

**CRITIQUES:**

End-of-Course Critiques are mandatory and must be completed prior to out-processing. Please be honest and specific. If you don't tell us who, what, where, when, or how, we can't do anything about your concerns or suggestions.

**GRADUATION:**

All students will participate in their own class graduation. Students who are departing LRAFB will need to pick-up an Out-processing checklist from MSgt Bogan. Students remaining on-station for follow-on training will not pick-up their Medical Record. The 314<sup>th</sup> Registrar will obtain your records for FIQ/LIQ in-processing.

**SPORTS & FITNESS CENTER:**

Building 1220. Hours of operation: daily, 5:00 a.m. to Midnight.  
NPS have mandatory exercise at 0645 each Friday. TDY personnel also participate. Group exercise class descriptions and a base running map are available for printing at <http://www.lrafbervices.org>.

## **EMERGENCY NOTIFICATION**

All students will be required to complete a Student Data Worksheet, to include a person to be contacted in case of an emergency. We must also have your local address including the room number and phone number. If you are going out of the local area for the weekend or any other time, you must sign out with the school so we can locate you if the need arises.

**Each student should contact their home unit/station, families, etc., and give them the following information for emergency notification.**

During normal duty hours (0700-1645) call in the order listed:

Basic Academic School – COMMERCIAL: (501) 987.7859  
DSN: 731.7859

Guard Operations – COMMERCIAL: (501) 987.6321  
DSN: 731.6321 (0600-2300 hrs)

Pipeline Student Dorm – COMMERCIAL: (501) 987.2491  
DSN: 731.2491  
MTL: 731.2384 or 2385

For TDY Students, after duty hours or on weekends, call the the following number:

Base Billeting – (501) 988.1141 + ROOM EXTENSION

Base Operator – (501) 987.1110 or DSN: 731.1110

### **EMERGENCY NOTIFICATION ONLY:**

A family member should call the AMERICAN RED CROSS in their state.

A military member may call: 1.877.272.7337 and state:

***“THIS IS AN EMERGENCY”*** and they will initiate emergency notification procedures. (See AFI 36-3003 for emergency leave procedures)

If you are staying off-base, be sure to inform your family and unit of your motel phone number. Any changes in your locator data must be given to your instructor so we can make this system work. Thanks for your cooperation!

### **RED CROSS COMMUNICATION SERVICES:**

The Red Cross Communication Services keep military personnel in touch with their families following the death or serious illness of a family member or other important events, such as the birth of a child. The Red Cross quickly sends emergency notifications on behalf of the family to military members serving anywhere in the world. The information or verification in a message assists the member's commanding officer with making a decision regarding emergency leave.

- How to contact the Red Cross to send an Emergency Message:

Active duty members & their immediate family members may call for help

7 days a week, 24 hours a day, 365 days a year.

The toll-free number is: 1.877.272.7337.

- Other family members who do not reside in the service members' household, retirees & civilians, may access Red Cross services through their local Red Cross chapter, which is listed in local telephone books and at <http://www.redcross.org/where/where.html> (enter your zip code).

Please pass on to your family, that when calling the Red Cross to send an emergency message, it is helpful to have the following information:

Service members:

- Full name
- Rank/Rating
- Branch of Service/Unit
- Social Security Number
- Military Address/Temporary Lodging

**Emergency Financial Assistance** – When urgent problems require the presence of the service member, the Red Cross may provide an interest-free loan or a grant for travel expenses. These funds, which may be authorized for other emergencies as well, are disbursed on the basis of need. 95% of all loans made to the military families are repaid.

**Information & Referral** – The Red Cross helps military families cope with non-urgent problems by providing information, referral, and guidance on a strictly confidential basis. These services can help military families understand and apply for government benefits, receive assistance from appropriate referral agencies, provide assistance in arranging family support, or even help resolve anxieties about loved ones.

**DIALING INSTRUCTIONS:**

DSN prefix for Little Rock AFB is 731-XXXX.

Commercial number is 501-987-XXXX. For calling on base, prefix 7-XXXX; Off-base in the local area is prefix 99-XXX-XXXX. For calling DSN, dial prefix 94-XXX-XXXX.

**OFFICIAL MAILING ADDRESS:**

189 AW/BAS

112 CMSgt WILLIAMS DRIVE

LITTLE ROCK AFB, AR 72099-4802

**FOR FED EX or UPS DELIVERY,  
USE THIS ADDRESS:**

189 AW/BAS (Student's Name & Rank)

137 MAJ GEN BAILEY DR.

BUILDING 137/ROOM 126

LITTLE ROCK AFB, AR 72099-4806

## **BASIC ACADEMIC TRAINING**

### **COURSE MEASUREMENT**

Both the BFE and BLM courses will be conducted in five (5) blocks of instruction. A series of Progress Checks will be administered during each course. The purpose of the Progress Checks is to help the student and the instructor identify any weak areas which require more instruction. The scores on the Progress Checks are NOT included in the student's grade point average. Block Tests will be administered at the end of each block. If a student receives a failing grade (below 85% for BFE, 85% for BLM & BLMCG) on either the Progress Check or the Block Test, they will be counseled, given Special Assistance Training and tested again. If they fail the re-test, they could be washed back or eliminated from the course.

### **HONOR GRADUATE/DISTINGUISHED GRADUATE PROGRAM**

To qualify for Honor Graduate, you must graduate with an average of 96% or better with no test failures, have an excellent conduct record, and be recommended by the academic instructor and school staff. The Distinguished Graduate **may** then be selected from the pool of honor graduates if all criteria are met. The Distinguished Graduate must have a 96% average or better with no test failures, demonstrate a good attitude, good military bearing, **and** be recommended by their academic instructor and school staff. After being mailed to the students' unit, the DG will receive a special diploma presented by their unit commander. Honor Graduates receive a HG designation letter presented by their unit commander.

### **CLASS LEADER**

The class leader is normally the highest-ranking student in the class. If there is more than one student of the same rank, date of rank will take precedence. The duties and responsibilities of the class leader are as follows:

1. If the instructor leaves the room, the class leader will take control of the class.
2. Make sure that assigned students enter and leave the room in an orderly fashion.
3. Help in maintaining order during class time.
4. Help in supervising cleanup and other details that require participation of the class members.
5. Help in maintaining orderly conduct and cleanliness of areas during break times.
6. Act as head of the class in matters in which the majority of the students desire to bring to the attention of supervisory personnel.
7. Work with fellow students to develop a receptive and cooperative attitude toward all school personnel, group and school policies, and instructional materials.
8. Encourage the class to maintain a high standard of military bearing, neatness and appearance at all times.

## **VISITING DIGNITARIES**

In the case of a visit by an official during the instructional period, you will continue with your work; however, if you are addressed by the official, answer briefly and then continue with your work. If it is necessary for the class to come to attention, you will be directed by your instructor. In the event that no instructor is present, the class leader will assume charge of the class.

## **REASONS FOR ELIMINATION**

1. Academic
  - a. Two (2) Test Failures
  - b. Recommendation by the Board of Elimination
    - (1) Board Members:  
School Manager, Course Manager, and neutral Instructor
    - (2) Board Members (Active Duty AF):  
School Manager, 314 OSS/OSF, and neutral Instructor
2. Disciplinary Problems
  - a. Incident involving law on base
  - b. Incident involving law off base
3. Drugs/Alcohol
  - a. Drugs will not be tolerated
  - b. Alcohol abuse will not be tolerated

## SUCCESSFUL TESTING TECHNIQUES

How often do you hear students complain that either an examination was not fair or that they just could not remember the right answers to a test question? Often these complaints do not reflect upon either the student's preparation for the examination or the quality of the examination. Such complaints usually result from a student's lack of test-taking skills. To improve your general test-taking skills, we recommend that students consider the following suggestions:

- **Relax before the examination.** This can best be done by engaging in a familiar activity that you enjoy, i.e., walking, talking to friends, and listening to music. By trying to study the same day as the examination, you may do yourself more harm than good. The amount of information you will learn will be small, and you may get yourself "keyed-up" and "jittery", thereby not performing as well as you might have on the examination.

- **Don't go to the examination room too early.** You will usually find yourself in the midst of poorly prepared students who have come early to get information from others or who are somewhat tense and excited.

There are many different types of tests that students take everyday. Here are some helpful tips that you can use when taking objective-type tests, such as multiple choice and true/false.

- **Read the general directions with care.** The slightest misunderstanding can mean the difference between a good and a poor test score.

- **Avoid wild guessing.** However, often the first answer that occurs to you is more likely to be the correct one.

- **Try to answer every question,** but do not spend too much time on any one item. Mark those questions that you cannot answer immediately and return to them later after you have answered all of the questions you can in the first reading of the test.

- **Give close attention to the phrasing of questions,** especially when they contain such words as *least, greatest, one, chief, best, worst, only, most, sometimes, always, never, or usually*. These words tend to "qualify" any statements made within a question and can substantially change the question's meaning.

- **If the correct answer does not come to you from the alternatives presented,** try to narrow down the number of possible choices by eliminating those answers which are obviously wrong.

- **In trying to answer true/false questions,** you may be able to evaluate the statement more easily if you change it from a negative to a positive statement or vice-versa.

- **When you have answered all of the questions,** do not change your answers unless you are quite certain your original answer was wrong. Students more frequently change from right to wrong answers than the reverse.

**The very best way to do well on a test is to study and know the material.**

## **FLIGHT ENGINEER DUTIES AND RESPONSIBILITIES**

AFMAN 36-2108  
AIRMAN AIR FORCE SPECIALTY  
FLIGHT ENGINEER

- A. Performs aircraft inspections. Performs aircrew visual inspection; non-scheduled aircraft maintenance; and pre-flight, through-flight, and post-flight inspections of aircraft away from home station. Maintains aircraft forms and records during flight and while aircraft is away from home station.
- B. Computes and applies aircraft weight, balance, and performance data. Determines and verifies passenger, cargo, fuel, and emergency and special equipment distribution and weight. Computes aircraft weight and balance to ensure specified limits are maintained. Computes takeoff, climb, cruise, and landing data. Determines engine fuel consuming using airspeed, atmospheric data, charts, computer, or electronic calculator. Records actual aircraft performance data in flight engineer's log.
- C. Operates and monitors engine and aircraft systems controls and indicators. Assist pilot or performs engine starts, and monitors runup, flight operations, and engine shutdown. Operates engine controls to provide desired efficiency and economy. Monitors engine instruments throughout period of operation. Controls, monitors, and regulates aircraft systems such as electric, communication, navigation, hydraulic, pneumatic, fuel, air conditioning, and pressurization; ventilation; auxiliary power unit; and lubrication systems. Observes warning indicators and light for fire, overheat, depressurization, and system failure. Reports abnormal conditions to pilot, and recommends corrective action. May also perform duties as gunner, hoist operator, and cargo sling operator.
- D. Plans and organizes flight engineer activities. Organizes flight engineering standardization, qualification, and other requirements flight engineer logs, reports, and records for accuracy, completeness, format, and compliance with current directives. Coordinates with other agencies and organizations to conduct flight engineer activities.
- E. Directs flight engineer activities. Administers qualification flight to personnel engaged in flight engineer activities within flight test and operations organizations. Directs standardization of flight engineer performance in conjunction with aircraft performance engineering, engine conditioning, and preventive maintenance programs. Ensures conformance with prescribed aircrew procedures.
- F. Inspects and evaluates flight engineer activities. Evaluates individual and group performance in terms of effectiveness and qualification in using equipment and materials. Interprets and discusses evaluation findings, and recommends action to correct deficiencies.
- G. Performs technical flight engineer functions. Resolves technical problems encountered by operating units. Renders advice and technical assistance to agencies engaged in functions associated with flight engineer activities. Advises organizational commander or staff agencies on status of flight engineer activities and adequacy of equipment. Maintains qualification in aircraft.



## **DUTIES OF THE FLIGHT ENGINEER**

AFM 51-9  
AIRCRAFT PERFORMANCE

### **The Flight Engineer's Role and Skill.**

The flight engineer (FE) is vital to the operation of the larger, more complicated aircraft. The qualified FE should have a wide mechanical background to perform the duties for this operation. The FE must understand engines thoroughly, from both a theoretical and operational standpoint. The FE must understand how the instruments and gauges of an aircraft work and know the limitations. He or she must be familiar with each of the complicated auxiliary systems and know the limitation of each.

### **Ground Duties:**

The FE's ground duties are many and varied due to rank and position assignment. Although squadron and command level duties vary, it is a universal and continuous requirement to stay current of directives, technical orders, operational policies and procedures. The qualified FE must maintain proficiency in the aircraft simulator and attend ground schools and refresher courses; perform numerous ground duties before take-off, and continue these duties once the aircraft is back on the ground.

The FE's ground duties before each mission begin with pre-mission planning. These duties consist of flight plan preparation or computerized flight plan coordination, and computing take-off and emergency landing data. The FE coordinates with maintenance personnel on aircraft status and with other loading personnel on load and center of gravity. The FE performs a power "on" and power "off" preflight or thru flight.

On the ground, the FE's main responsibility is to check aircraft condition and to perform systems operational checks. Also to bring to the attention of maintenance personnel any irregularities in systems operations for adjustment and repair. Negligence in performing any of these very important duties could jeopardize the mission and even result in the loss of the aircraft and crew.

### **Flight Duties:**

Flight duties are similar and even the same in some cases, to ground duties. But, ground emergency procedures are generally different from flight procedures. Flight duties begin once the condition of the aircraft is determined and the crew has accepted the aircraft. Normally, and in most aircraft, the FE position must be occupied during all phases of ground and air operation.

Crew coordination is always very important. The engineer must be able to handle any system malfunction and assist the pilot in making any decision that could have an effect on the accomplishment of the mission.

Before engine start, the engineer must calculate and the pilot must check the aircraft performance data. Each crewmember must be in their primary flight position.

The pilot starts the engines in accordance with flight manual (-1) procedures, and the engineer observes each engine for irregularities. Normally, as the last engine starts, the engineer records this time and other information in his or her cruise performance log.

Taxi and operating time before lineup on the runway is critical. The engineer uses this time to perform any last minute operation or to make any decision before take-off roll.

The FE must be extremely alert during take-off and must take appropriate action should an emergency arise. With the take-off a success, the FE will continue to monitor systems operation and engine power, and update performance data throughout the climb to the assigned cruise altitude.

The duties continue during cruise: updating performance data, logging data, monitoring system operation, and before descent, computing landing data based on current conditions. The landing conditions could be critical and often require extensive performance computations. The aircraft commander and crew will base their decision to land or fly to their alternate on the engineer's computations.

The FE must perform extensive flight duties in a professional manner. These duties are not complete until the aircraft is safely on the ground and maintenance personnel are briefed on the aircraft conditions and any discrepancies.

### **Maintenance Knowledge:**

The competent FE has good working knowledge of maintenance procedures. This knowledge can save hours of the maintenance crew's time by diagnosing trouble as it occurs and reporting it to maintenance personnel on landing. The engineer has a technical background which enables him/her to recognize the probable cause of trouble much more readily than the pilot. The engineer can give a more detailed report of the symptoms. At times, by radioing this report ahead, parts will be ready, and work can start immediately after the aircraft lands.

The requirement to make inflight repairs still exists, and sometimes an engineer can make a temporary repair or isolate the malfunction. The FE does not perform extensive maintenance; that is for specialists. Maintenance knowledge helps the FE coordinate with maintenance personnel and in making emergency repairs.

The FE uses maintenance and systems knowledge during ground and flight duties. The safety and welfare of the aircraft and crew depend directly on the FE's knowledge, experience, and the skill with which he/she discharges his/her duties.

### **Terminology**

Since the FE records much of the flight data in the form of symbols, abbreviations, formulas, and special terms, he/she must master this terminology. He/she must do so to thoroughly understand the publications and reports about aircraft operations and maintenance.

## **DUTIES AND RESPONSIBILITIES OF THE LOADMASTER**

AFMAN 36-2108  
AIRMAN AIR FORCE SPECIALTY  
LOADMASTER

A. Reviews aircraft weight & balance records and cargo manifest. Determines quantity of cargo and passengers or troops to be loaded and proper placement in aircraft. Computes load and cargo distribution. Computes weight & balance, and determines the amount of weight to be placed in each compartment or at each station. Considers factors such as fuel load, aircraft structural limits, and emergency equipment required.

B. Accomplishes initial pre-flight of aircraft according to flight manuals; pre-flights specific aircraft systems such as restraint rail and airdrop equipment. Operates radios, pre-flights aerospace ground equipment, and applies external power to the aircraft. Performs in-flight and special mission specific duties as required.

C. Supervises aircraft loading and off-loading. Uses equipment such as 25K, 40K, and 60K loaders; forklifts; and winches. Ensures cargo and passengers are loaded according to load distribution plan. Directs application of restraint devices such as restraint rails, straps, chains, and nets to prevent cargo shifting during flight. Checks cargo, passengers, and troops against manifests.

D. Ensures availability of fleet service equipment such as blankets and pillows. Signs for and stows in-flight meals. Briefs passengers and troops on use of seat belts, facilities, and border clearance requirements. Dispenses meals and refreshments. Demonstrates use of emergency equipment such as oxygen masks and life vests, and ensures access to escape hatches. Monitors cargo and passengers in-flight and assist passengers as required.

E. Conducts cargo and personnel airdrops according to directives. Attaches extraction parachutes to cargo and platforms. Inspects cargo and platforms, extraction systems and connects static lines. Checks tie-downs, parachutes, containers, suspension systems, and extraction systems to ensure proper cargo extraction or release. Operates aircraft personnel airdrop system and supervises paratroopers exiting the aircraft.

### **The Loadmaster's Role and Skill**

The Loadmaster (LM) is considered the on-scene expert in the cargo compartment of airlift aircraft. He/she should have a fair mechanical aptitude and the ability to adapt to a variety of configurations, loads, and situations. A complete understanding of floor and aircraft limitations is vital to the loadmasters job, as is various loading methods and equipment associated with airlift.

### **Ground Duties**

As with the FE, ground duties are many and varied due to rank and position assignment. LMs have to stay current of directives, tech orders, operational policies and procedures. Required ground schools, refreshers, and squadron level loadmaster functions must also be completed in a timely manner.

Ground duties for a LM begin with pre-mission planing and sign-in completion. If loads are to be carried, reporting to ATOC for load briefings may be required. When arriving at an aircraft, a series of checklists must be accomplished to ensure that the aircraft is properly prepared and everything is in working order. If loading cargo, it must be done in a safe and efficient manner. If airdropping, the load has to be rigged properly. The weight and balance condition of the aircraft must be calculated to

determine if it is within certain limits. How the LM loads the aircraft dictates how the aircraft will be balanced.

### **Flight Duties**

Once in flight, certain checklists must be run at appropriate times. Also, in flight monitoring of some aircraft systems, passengers, and certain loads must be accomplished. With the operation of the aircraft, crew coordination becomes all-important. All crewmembers must be able to work together to safely take-off, fly, and land the aircraft.

### **Landing Duties**

When arriving at your destination, cargo, passengers, litters, etc., must be off-loaded in a safe and efficient manner. If uploading for another leg, all loading functions and preparations must be re-accomplished.

### **Personal Responsibility**

It is the LMs responsibility to educate his/herself of the duties required for their crew position, and to maintain a high degree of commitment toward the position. This ensures good judgement and situational awareness. Limitations and emergency procedure knowledge is vital for aircraft and crew safety, and we must all be thoroughly familiar with these procedures.

### **Specialty Summary**

Accomplishes loading and off-loading aircraft functions; performs preflight and postflight of aircraft and aircraft systems. Performs loadmaster aircrew functions and computes weight and balance. Provides for safety and comfort of passengers and troops, and security of cargo, mail, and baggage during flight. Conducts cargo and personnel airdrops. Supervises loadmaster activities and related functions, including aircraft loading and offloading activities, cargo handling, and restraint.